



**U.S. Department of Energy**  
**Office of River Protection**

**P.O. Box 450**  
**Richland, Washington 99352**

02-OSR-0054

Mr. Ron F. Naventi, Project Manager  
Bechtel National, Inc.  
3000 George Washington Way  
Richland, Washington 99352

Dear Mr. Naventi:

CONTRACT NO. DE-AC27-01RV14136 – ASSESSMENT AND CORRECTIVE ACTION  
INSPECTION REPORT, IR-02-001

From January 7 through 11, 2002, the U.S. Department of Energy, Office of River Protection, Office of Safety Regulation (OSR) inspected the Bechtel National, Inc. (BNI) assessment and corrective action processes. Details of the inspection are documented in the enclosed inspection report (Enclosure 2).

The inspectors identified one Finding related to failure to take timely corrective action as required by the BNI Quality Assurance Manual. This Finding is documented in the Notice of Finding (Enclosure 1). The inspectors found that a noncompliance, identified by BNI, regarding failure to establish an Executive Committee to provide independent oversight of safety, was documented on September 5, 2001. The Executive Committee is a requirement of the Integrated Safety Management Plan (ISMP), which is an element of the Contractor's authorization basis. As of January 9, 2001, no remedial or corrective actions were taken.

Notwithstanding this Finding, the inspectors found that the Contractor's procedures for assessment and corrective action were adequate and effective. The inspectors determined that assessment and corrective action processes were integrated and effective. With limited exceptions, procedures were in place, staff was trained to the procedures, and staff was following the procedures.

If you have any comments concerning the inspection report, you may contact me or Pat Carier of my staff, (509) 376-3574. Nothing in this letter should be construed as changing the Contract, DE-AC27-01RV14136. If, in my capacity as the Safety Regulation Official, I provide any direction that your company believes exceeds my authority or constitutes a change to the Contract, you will immediately notify the Contracting Officer and request clarification prior to complying with the direction.

Sincerely,

Robert C. Barr  
Safety Regulation Official  
Office of Safety Regulation

OSR:ARH

Enclosures

## NOTICE OF FINDING

Standard 7, "Environment, Safety, Quality, and Health," of Contract DE-AC27-01RV14136, dated December 11, 2000, between Bechtel National, Inc. (the Contractor) and the U.S. Department of Energy (DOE), defines the Contractor's responsibilities under the Contract as they relate to conventional nonradiological worker safety and health; radiological, nuclear, and process safety; environmental protection; and quality assurance (QA).

Standard 7, Section (e)(2)(ii), of the Contract requires the Contractor to comply with the specific nuclear regulations defined in the effective rules of Title 10 of the Code of Federal Regulations (CFR), Part 800 series of nuclear requirements.

10 CFR 830, "Nuclear Safety Management," Subpart A, "Quality Assurance Requirements," requires the Contractor to conduct work in accordance with the requirements of Subpart A and to develop a QA Program that reflects the requirements of Subpart A.

The Contractor's QA Program is defined in 24590-WTP-QAM-QA-01-001, *Quality Assurance Manual*, Rev. 0, dated August 2001 (referred to as the QA Manual).

The Contractor's Policy Q-16.1, "Corrective Action," requires in Section 3.1.1, B), that "Conditions adverse to quality shall be identified promptly and corrected as soon as practicable."

During the performance of an inspection of the Assessment and Corrective Action processes conducted from January 7 through January 11, 2002, at the Contractor's offices, the Office of Safety Regulation (OSR) identified the following:

Contractor procedure 24590-WTP-GPP-QA-201\_1, "Corrective Action," Section 3.2.5, Item 1), requires the correction of conditions adverse to quality (CAQs) to be assigned to a responsible manager and requires, "Timely execution of corrective action(s) assigned to them." The inspectors discussed the expectation for corrective action timeliness with responsible QA staff and were told the Contractor expects proposed corrective actions to be identified within 30 days of documenting the noncompliance.

Contrary to the above, the timing of the Contractor's actions to correct deficiency report 24590-WTP-DR-QA-01-048 (subsequently rewritten as 24590-WTP-CAR-QA-01-009) was not timely. The inspectors observed that this deficiency report documented a noncompliance with the requirements of the Integrated Safety Management Plan (ISMP), which is an element of the Contractor's authorization basis, concerning not having established an Executive Committee to provide independent oversight of safety. This noncompliance was documented as a deficiency report and assigned to a responsible manager on September 5, 2001. As of January 9, 2002, no remedial or corrective actions were documented, or taken to address the deficiency.

Based on this timeline, the inspectors determined the timeliness of the Contractor's corrective action did not meet the requirements of the Contractor's QA Manual or the corrective action procedure.

This is considered an inspection Finding (Section 1.6.2, IR-02-001-01-FIN).

The OSR requires the Contractor to provide, within 30 days of the date of the cover letter that transmitted this Notice, a reply to this Finding. The reply should include (1) admission or denial of the alleged Finding, (2) the reason for the Finding, if admitted, and if denied, the reason why, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further Findings, and (5) the date when full compliance with the applicable commitments will be achieved. The Contractor's response must address both the lack of timeliness and the noncompliance with the requirements of the ISMP. When good cause is shown, consideration will be given to extending the requested response time.

U.S. DEPARTMENT OF ENERGY  
Office of River Protection  
Office of Safety Regulation

INSPECTION: ASSESSMENT AND CORRECTIVE ACTION

REPORT: IR-02-001

FACILITY: Bechtel National, Inc.

LOCATION: 3000 George Washington Way  
Richland, Washington 99352

DATES: January 7-11, 2002

INSPECTORS: A. Hawkins Lead Inspector  
C. Taylor, OSR Consultant  
D. Ryder, OSR Consultant  
S. English, OSR Consultant

APPROVED BY: P. Carrier, Verification and Confirmation Official  
Office of Safety Regulation

**EXECUTIVE SUMMARY**  
Assessment and Corrective Action  
Inspection Report Number IR-02-001

## INTRODUCTION

This inspection of Bechtel National, Inc. (BNI – the Contractor) Assessment and Corrective Action processes covered the following specific areas:

- Adequacy and Effectiveness of Procedures (Section 1.2)
- Reportable Occurrences (Section 1.3)
- Independent Audits/Assessments (Section 1.4)
- Management Assessments (Section 1.5)
- Corrective Action (Section 1.6)
- Follow-Up and Closure (Section 1.7)
- Quality Trending (Section 1.8)
- Stop Work (Section 1.9)

## SIGNIFICANT OBSERVATIONS AND CONCLUSIONS

- **Adequacy and Effectiveness of Procedures** – The Contractor's procedures for assessment and corrective action were adequate. With limited exceptions, procedures were in place, staff was trained to the procedures, and staff was following the procedures. Assessment and corrective action processes were integrated and effective. (Section 1.2)
- **Reportable Occurrences** – The Contractor effectively and adequately handled the small number of reportable occurrences occurring to date. (Section 1.3)
- **Independent Audits/Assessments** – The Contractor's current process for performing internal and external supplier audits was adequately implemented. The inspectors observed the lack of review and approval of auditor qualifications. Because the Contractor took prompt and effective corrective action before the inspection was completed, this was not cited as a Finding. Although not required, the Contractor was not using technical specialists during audits and not including "corrected on the spot" (COTS) information in the Corrective Action Management System (CAMS) database. (Section 1.4)
- **Management Assessments** – The Contractor had implemented an adequate and effective process for conducting management assessments. Line managers who were responsible for implementing management assessments demonstrated good ownership of the process. However, the Annual Assessment Plan was not updated or revised to reflect additional assessments performed, and four of the five management assessments reviewed did not include the preparation and issuance of a Management Assessment Plan. In addition, there were no requirements established for the training and qualification of management

assessment team leaders – even though there were expectations expressed by the Quality Assurance (QA) Manager. Because the Contractor took prompt and effective corrective action before the inspection was completed, these Findings were not cited. (Section 1.5)

- **Corrective Action** – The Contractor's corrective action process was adequate. Conditions adverse to quality (CAQs) were appropriately documented, and corrective actions were defined, tracked, and verified. The overall management of the corrective action process observed during this inspection was controlled and thorough and was appropriately focused on capturing, evaluating, and trending results; assuring closure; and verifying the effectiveness of corrective actions. Improvement was needed in two areas identified as Findings; however, these problems did not indicate systemic failures. The Findings involved 1) lack of review of corrective action reports (CARs) for occurrence reportability, and 2) failure to meet timeliness requirements for corrective actions (IR-02-001-01-FIN). Because the Contractor took prompt and effective corrective action before the inspection was completed, the first Finding was not cited. (Section 1.6)

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## **ASSESSMENT AND CORRECTIVE ACTION INSPECTION REPORT**

### **1.0 REPORT DETAILS**

#### **1.1 Introduction**

In accordance with the River Protection Project Waste Treatment Plant (RPP-WTP) Contract,<sup>1</sup> the Contractor must comply with the accepted and approved *Quality Assurance Manual*, 24590-WTP-QAM-QA-01-001, Rev. 0 (referred to as the QA Manual in this report).

The inspectors reviewed the Contractor's assessment and corrective action programs and activities to determine if they complied with the commitments in the QA Manual and the implementing procedures that deploy the requirements. This onsite review was initiated on January 7, 2002, and completed with an exit meeting on January 11, 2002.

The inspection also included a verification of a previous corrective action commitment from the *Training and Qualification Inspection Report*, IR-01-001.

The scope of this inspection included all activities since March 2001 but focused on the activities performed since the procedure changeover in September 2001 that transitioned previous procedures to methods and processes consistent with the Contractor's corporate approach.

#### **1.2 Adequacy and Effectiveness of Assessment and Corrective Action Procedures (Inspection Technical Procedure (ITP) I-103)**

##### **1.2.1 Inspection Scope**

The inspectors assessed the adequacy of the Contractor's procedures for assessment and corrective action and their implementation. This inspection included examining documentation and interviewing selected staff.

##### **1.2.2 Observations and Assessments**

The Contractor initiated a revision to previous project procedures in September 2001, which included the procedures for assessment and corrective action. The Contractor was continuing with procedure updates and revisions as the need arose. For example, at the beginning of this inspection, the Contractor was revising procedure 24590-WTP-GPP-MGT-002\_0, "Management Assessments."

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<sup>1</sup> Contract DE-AC27-01RV14136 between the U.S. Department of Energy and Bechtel National, Inc., dated December 11, 2000.

The inspectors verified the implementation of the procedures for assessment and corrective action, as specifically noted in the following report sections. This inspection revealed that Contractor staff was meeting the overall objectives of the procedures. Assessments were planned and plans were followed. The inspectors determined that assessment reporting was acceptable, and the interface between assessment and the corrective action management system was effectively maintained. However, detailed requirements were not being followed in all areas (for example, see Sections 1.4.2 and 1.6.2). These specific noncompliances were not considered important-to-safety, but the aggregate of the noncompliances reveals an area for continued examination.

In addition, the QA Manager stated that the Contractor was proposing to move from compliance-based assessments to performance-based assessments. The inspectors noted that the Contractor's compliance-based assessments revealed areas in which staff was noncompliant and had identified other ways to achieve the objective or did not understand the value of the designated actions. Compliance-based assessments also identified areas for causal analysis and re-evaluation of the adequacy of the procedures.

### **1.2.3 Conclusions**

The inspectors found that the Contractor's procedures for assessment and corrective action were adequate and effective and that the Contractor complied with its QA Manual. The inspectors determined that assessment and corrective action processes were integrated and effective. With limited exceptions, procedures were in place, staff was trained to the procedures, and staff was following the procedures.

## **1.3 Reportable Occurrences (ITP I-103)**

### **1.3.1 Inspection Scope**

The inspectors reviewed the effectiveness of the Contractor's incident investigation and reporting system. This review included categorization, notification, and reporting of occurrences per Safety Requirements Document (SRD) and Integrated Safety Management Plan (ISMP) requirements as addressed in the following documents:

- 24590-WTP-GPP-SIND-001A\_0, "Reporting Occurrences in Accordance with DOE Order 232.1A"
- 24590-WTP-GPG-QA-204\_0, "Root Cause Analysis and Corrective Action Development Guide"
- 24590-WTP-GPP-QA-201\_1, "Corrective Action."

The inspectors also reviewed the Contractor's processes for incident investigation, reporting, and finding resolution. The inspectors interviewed the Contractor staff responsible for conducting incident investigations and reporting events and reviewed records of the events.

### **1.3.2 Observations and Assessments**

The inspectors confirmed the Contractor's procedures adequately addressed categorization, notification, reporting, incident investigation, and finding resolution for reportable occurrences. The procedures were implemented as written.

The Contractor had identified, categorized, notified, investigated, and reported only one reportable event (i.e., RPP--BNRP-RPPWTP-2001-TEMP) at the time of the inspection. The inspectors reviewed the categorization, notification, investigation, and reporting records for this event, which was categorized on October 22, 2001. During the inspection, a second reportable event was identified and categorized on January 8, 2002. The inspectors also reviewed the records generated during the inspection for the second event. (OSR review and close out of occurrence reports are performed and documented during routine inspections throughout the life of the project.)

### **1.3.3 Conclusions**

The inspectors determined Contractor procedure 24590-WTP-GPP-SIND-001A\_0, "Reporting Occurrences in Accordance with DOE Order 232.1A," to be effective and adequately implemented for the two reportable occurrences described above.

## **1.4 Independent Audits/Assessments (ITP I-103)**

### **1.4.1 Inspection Scope**

The inspectors reviewed the effectiveness of the Contractor's independent audit/assessment process, including internal audits and external audits of suppliers. The inspectors also reviewed whether the Contractor's process complied with the requirements of its QA Manual. The scope included audit scheduling, planning, team selection, performance, reporting, and follow-up.

### **1.4.2 Observations and Assessments**

The inspectors reviewed the Contractor's procedures relevant to the planning and performance of the Contractor's QA audit program (independent assessments). The inspectors reviewed Contractor procedure 24590-WTP-GPP-QA-501\_0, "Independent Assessment (Audit)," and determined that it describes an adequate internal audit process. The inspectors also reviewed Contractor procedure 24590-WTP-GPP-QA-401\_0, "Supplier Quality Evaluation and Selection," and determined that it describes an adequate external supplier survey and audit process. The inspectors evaluated the schedules for internal and external audits and determined they complied with the applicable procedure, and were being properly implemented.

During the inspection, four audits (three internal audits and one external audit) and supporting documentation were evaluated to determine the adequacy and effectiveness of the Contractor's QA audit program. The audits selected for evaluation were performed subsequent to the Contractor's issuance of its own audit procedures on or about October 2001. The audit reports and related documentation are listed below:

- Audit 24590-WTP-AR-QA-01-018, Rev. 0, External Audit of Savannah River Technology Center
- Audit 24590-WTP-IAR-QA-01-026, Rev. 0, Internal Audit of Project Administration and Document Control
- Audit 24590-WTP-IAR-QA-01-003, Internal Audit of Process Technology
- Audit 24590-WTP-IAR-QA-01-009, Internal Audit of Construction Training.

The inspectors reviewed the audit plans for the four audits and determined they were prepared and approved in accordance with the applicable procedure. The audit teams consisted of individuals with the appropriate experience who were trained and qualified for their assigned audit responsibilities. The audit teams performed the four audits using detailed checklists as required by the applicable procedure.

The inspectors reviewed Contractor procedure 24590-WTP-GPP-QA-203\_0, "Auditor/Lead Auditor Training and Qualification," and determined that it described an adequate process for training and qualification of auditors and audit team leaders (ATLs). The inspectors reviewed the qualification records for the ATLs who led the four audits and the following training and qualification documents:

- Memorandum CCN 018355, George Shell to File, *Designation of R.V. Hollenbeck to Qualify Quality Assurance Engineers and Certify Audit Team Leaders (ATL) and Lead Auditors (LA) for the BNI WTP Project*, February 15, 2001
- Memorandum CCN 026841, Karen Vacca to George Shell, *Audit Team Leader (ATL) Certifications for the Year 2002*, January 7, 2002
- ATL Qualification Documentation for Wayne Akeley, Robert Hollenbeck, Howard Kaczmarek, and Dave Shugars
- Training Profiles for Patricia Talmage, Martin Ehlinger, Douglas Neal, Wesley Rimel, Ronald Reed, and Virginia McIntyre.

The four ATLs were qualified and an authorized individual properly prepared the documentation. A review of the auditors' training profiles determined that the individuals had completed the training as required by Section 3.4.1 of the procedure and therefore, were qualified to function as auditors. However, the qualifications of the individuals identified in the audit plans as auditors were not reviewed and approved as required by Section 3.4.4 of the procedure. The Contractor corrected this problem on the spot by correcting its audit plans and

subsequently prepared a CAR (24590-WTP-CAR-QA-02-034) to assure the problem was documented for tracking and trending. Accordingly, based on OSR inspection procedures, the inspectors, with the concurrence of the Verification and Confirmation Official, determined this deficiency met the criteria of a non-cited Finding. The Contractor had not used technical specialists (an option during the performance of the audits), although the Contractor planned to include technical specialists in future audits.

The inspectors reviewed Contractor procedure 24590-WTP-GPP-QA-201\_1, "Corrective Action," and determined that it described a sufficient process for reporting audit results that require corrective action. One of the internal audits resulted in the issuance of an audit report that identified four minor findings that were "corrected on the spot" (COTS) and closed out during the audit as allowed by the internal audit procedure. The other two internal audit reports were still being drafted (i.e., the report was not required to be issued until after this inspection). These same two audits resulted in four corrective action reports (CARs), which were prepared in accordance with the corrective action procedure. One of the internal audits resulted in the issuance of approved versions of the CARs before the issue of the final report, which the inspectors determined to be a good practice. The report for the external audit was issued and included three supplier CARs prepared in accordance with the corrective action procedure. In all cases, the results of the audits were discussed with the audited organization during an exit meeting. The CARs were included in the Contractor's Corrective Action Management System (CAMS) database, as required by procedure. The inspectors observed that COTS activities were not being included in the CAMS. Although the procedure is nonspecific on this topic, failure to include this information may contribute to issues being overlooked when trending corrective action data.

Two of the internal audits had corrective action responses that were due back from the audited organization after conclusion of this inspection. The findings for the other internal audit were COTS, and no further evaluation or follow-up was required for another six months. The response from the supplier for the external supplier audit was overdue, and the ATL had been in touch with the supplier to obtain its response as soon as possible. Because the audits were in the early part of their life cycle, the inspectors were not able to adequately evaluate the Contractor's evaluation of corrective action responses and follow-up on the adequacy of the corrective action.

### **1.4.3 Conclusions**

The inspectors found the Contractor was properly implementing its process for performing internal and external supplier audits, and that the process met the requirements of the Contractor's QA Manual. The inspectors observed that auditor qualifications were not reviewed and approved per the governing procedure. This was adequately addressed during the inspection. Although not required, the inspectors observed the Contractor had not yet utilized technical specialists on audit teams and was not including the COTS information in the CAMS database.

## 1.5 Management Assessments (ITP I-103)

### 1.5.1 Inspection Scope

The inspectors reviewed the effectiveness of the Contractor's management assessment process and results, including verification of management ownership. The inspectors evaluated compliance with the requirements of the QA Manual, Policy Q-18.3, "Management Assessment." The inspectors evaluated the implementation of the management assessment process elements for scheduling, planning, performance, documentation, results, and corrective action follow-on.

### 1.5.2 Observations and Assessments

The inspectors verified management was assessing the implementation of its management processes. The inspectors concluded line managers, who were responsible for implementing management assessments, demonstrated good ownership of the process. The inspectors observed the five management assessment reports examined were focused on topics management considered important, although the assessments did not always specifically evaluate effectiveness, efficiency, and adequacy of procedures and resources. The Contractor had recently performed a self-assessment of the management assessment process and self-identified the need to improve the effectiveness of assessments.

The inspectors verified the Contractor was conducting management assessments at reasonable intervals. The inspectors verified there was an annual schedule for management assessments, and each identified functional area had at least one identified assessment performed during the 12-month cycle. The inspectors examined Revisions 2 and 3 of 24590-WTP-MAS-MG-01-001, *WTP Management Assessment Schedule*. The inspectors observed the management assessment schedule was not updated to reflect additional assessments performed as required by procedure 24590-WTP-GPP-MGT-002\_0, "Management Assessments," Section 3.3.4. The schedules did not capture past performed activities and some planned activities as required by the procedure. For example, the schedules did not reflect 24590-WTP-RPT-G-01-002\_0, "Readiness Self-Evaluation of Limited Construction Authorization Request Activities," or the planned annual review of the results of the management assessments. The Business Services functional area was identified to conduct management assessments in July and October. In reality, seven assessments were conducted in Business Services during June, July, August, October, and November. These assessments were not reflected on the schedule.

The inspectors verified the Contractor was conducting management assessments in a planned manner. The inspectors evaluated five management assessments that were performed since the issuance of the management assessments procedure in September 2001:

- 24590-WTP-MAR-ENG-01-007\_0, *Management Assessment on ALARA Incorporation in Design*, October 4, 2001
- 24590-WTP-MAR-ESH-01-002\_0, *Planned Management Assessment of ALARA Design Review & Documentation*, October 24, 2001

- 24590-WTP-MAR-ESH-01-008\_0, *December, 2001 Assessment of the WTP Radiation Protection Program*, December 10, 2001
- 24590-WTP-MAR-G-01-001\_0, *Subcontract Integration Management Assessment Report for Subcontract Daily Reports*, December 10, 2001
- 24590-WTP-MAR-QA-02-001\_0, *RPP-WTP Management Assessment of the Management Assessment System*, January 9, 2002.

The five management assessment reports reviewed contained information that addressed many of the elements required by the Management Assessment Procedure. The inspectors also interviewed staff who served as Assessment Team Leaders and confirmed there was preliminary communication between the Assessment Team Leader and the responsible functional manager as to what was to be accomplished, how the assessment was to be reported, and ownership and acceptance of the results. The inspectors found the planning and mutual understanding of the purpose, scope, methods, and results were sufficient. For four of the five assessments, the inspectors did not find evidence that a formal Management Assessment Plan was prepared at the beginning of the effort and sent to Project Document Control (PDC), as required by procedure 24590-WTP-GPP-MGT-002\_0, "Management Assessments," Sections 3.4.3, 3.4.4, and 3.4.6. The information that was to be included in the formal plan was routinely summarized and recorded in the final management assessment report.

The inspectors verified the management assessment reports were documented and sent to PDC for appropriate distribution. The inspectors also verified the information identified in the management assessment reports was being captured in the Management Assessment Database (MAD) or the CAMS database. The inspectors determined the Assessment Team Leaders and the responsible functional managers were knowledgeable of how to identify an item that should be put into the CAR, nonconformance reporting, or stop work processes. The management assessment reports were properly documented, approved, and distributed. Oral interviews confirmed there was good communication between multiple involved parties responsible for the corrective actions from the ALARA design review and documentation management assessment (24590-WTP-MAR-ESH-01-002). Issues associated with the identified management assessment reports (with the exception of those associated with 24590-WTP-MAR-QA-02-001, which had just been issued) had been sent to QA for entry into the CAMS database.

The management assessment reports included results that were described in a variety of ways: improvement required, recommendations for improvement, opportunities for improvement, highlighted results with no identification of evaluation, assessment results and proposed actions, positive and negative observations, etc. The variety of ways in which results were presented made it difficult for the CAMS administrator to determine the bottom line results. The reports did not clearly identify the actions to be taken or the responsible staff. The administrator did capture each report and his interpretation of key items. The QA Manager indicated this was an area for improvement and was being addressed in a procedure revision. Identified corrective actions were being addressed and closed in the CAMS database.

The inspectors examined the Contractor's process for determining how the management Assessment Team Leader was determined to be "trained and qualified" per the basic requirements of the QA Manual. The inspectors observed the management assessment procedure did not specify minimum qualifications for the Assessment Team Leader. Of 14 Assessment Team Leader employee profiles reviewed, 6 had evidence the management assessment procedure had been reviewed. The inspectors discussed Contractor expectations for training and qualification of Assessment Team Leaders with the QA Manager, who said his expectation was to be able to demonstrate the Assessment Team Leader had read the procedure.

The inspectors confirmed the WTP Project Manager's annual review of the results of internal and external assessments had not yet been conducted. The QA Manager indicated this review was to be conducted in March 2002, after the Bechtel Corporate assessment of the QA Program, which was tentatively scheduled for February 2002.

### **1.5.3 Conclusions**

The inspectors concluded the Contractor had implemented an effective process for conducting management assessments that complied with the requirements of Policy Q-18.3. The inspectors observed the line managers who were responsible for implementing management assessments demonstrate good ownership of the process. The inspectors also observed: 1) the Annual Assessment Plan was not updated or revised to reflect additional assessments performed and 2) four of the five management assessments reviewed did not include the preparation and issuance of a Management Assessment Plan. The inspectors observed there were no requirements established for the training and qualification of management Assessment Team Leaders – even though there were "expectations" expressed by the QA Manager. During the inspection, the Contractor prepared and issued a CAR (24590-WTP-CAR-QA-02-005) to document and correct these deficiencies. Corrective actions included revising the Management Assessment procedure and updating the Management Assessment schedule. Accordingly, based on OSR inspection procedures, the inspectors, with the concurrence of the Verification and Confirmation Official, determined these deficiencies met the criteria of a non-cited Finding.

## **1.6 Corrective Action (ITP I-103)**

### **1.6.1 Inspection Scope**

The inspectors reviewed the effectiveness of the Contractor's corrective action process, including the reporting, documentation, classification, and correction of conditions adverse to quality (CAQs). The inspectors evaluated compliance with the requirements of the QA Manual, Policy Q-16.1, "Corrective Action." The inspectors also reviewed the Contractor's processes to verify the completion of corrective actions and to subsequently review corrective actions for effectiveness.



## 1.6.2 Observations and Assessments

The inspectors examined the Contractor's program for corrective action as defined in procedure 24590-WTP-GPP-QA-201\_1, "Corrective Action." The inspectors verified whether noncompliances with QA requirements or implementing documents were classified as CAQs or significant conditions adverse to quality (SCAQs). The inspectors randomly selected 10 open CARs (previously called deficiency reports) and examined them against the following requirements of the corrective action procedure:

- Reviewed for stop work – The inspectors found that all CARs examined were signed as having been reviewed for stop work considerations as required by the Contractor's procedure. The inspectors determined that this was adequate evidence of stop work review. The inspectors observed that no stop work actions have occurred. The inspectors also reviewed procedure 24590-WTP-GPP-QA-206A\_0, "Stop Work," and determined the authority and responsibility of the QA Manager are clearly defined. The inspectors determined that this is consistent with the requirements of the QA Manual, Policy Q-16.2, "Stop Work."
- Reviewed for PAAA consideration – The inspectors met with the PAAA Coordinator, who stated that all CARs were examined for PAAA considerations. The inspectors found this was adequate.
- Assigned a QA point of contact (POC) – The inspectors found that 9 of the 10 CARs examined showed the assignment of a QA POC. The missing assignment was discussed with the responsible Quality Evaluator, who corrected the problem on the spot. The inspectors determined that this was evidence that QA POCs were assigned.
- Reviewed for occurrence reportability – Section 3.2.1, Item 5, of the corrective action procedure states the "Quality Assurance Manager (or designee) is responsible for ... reviewing the CAR for potential occurrence reportability [to the DOE Occurrence Reporting and Processing System]." The inspectors found no evidence that this review was conducted. The review was not an element of the CAR form. In an interview, the Contractor's occurrence reporting lead stated that he had received no contacts from the QA organization and did not receive CAR forms. In interviews with four QA staff that sign CAR forms as POCs, none indicated reviewing for potential occurrence reportability as a step taken by the QA organization. (The Contractor's PAAA Coordinator noted that he considered whether the CAR should be considered for occurrence reporting when he reviewed the document. However, given the time constraints associated with occurrence reporting, this review would not be timely.) The inspectors considered this failure to follow procedure for this important aspect of the Contractor's corrective action system to be a Finding. The Contractor documented this deficiency as 24590-WTP-CAR-QA-02-010, assigned responsibility to the Programs QA Manager, and initiated corrective action to modify procedures and retrain the appropriate staff. These actions were completed before completion of this inspection. Accordingly, based on OSR inspection procedures, the inspectors, with the concurrence of the Verification and Confirmation Official, determined this deficiency met the criteria of a non-cited Finding.

- Proposed action concurred with by QA POC – The inspectors found that the assigned QA POC signed CARs where the proposed corrective action was defined.
- Corrective action verified by QA POC – The inspectors found that the QA POC verified CARs where the corrective action was completed. The inspectors reviewed the file documentation of the verification effort and found it was satisfactory.

The Contractor's QA Manual, Policy Q-16.1, "Corrective Action," required in Section 3.1.1, B), that "Conditions adverse to quality shall be identified promptly and corrected as soon as practicable." The Contractor's corrective action procedure assigned the correction of CAQs to a responsible manager and required in Section 3.2.5, Item 1), that "Timely execution of corrective action(s) assigned to them."

The inspectors verified whether CAQs were identified promptly and corrected as soon as practicable. The inspectors examined the 10 open CARs and determined the timing of actions to report, document, classify (as CAQ or SCAQ), and complete corrective action was adequate. At the request of the Safety Integration Inspection Team Leader (who was conducting a concurrent inspection), the inspectors also examined the timing of the Contractor's actions to correct deficiency report 24590-WTP-DR-QA-01-048 (subsequently rewritten as 24590-WTP-CAR-QA-01-009). The inspectors observed this deficiency report documented a noncompliance with the requirements of the ISMP, which is an element of the Contractor's authorization basis. The inspectors discussed the expectation for corrective action timeliness with responsible QA staff and were told the Contractor expected proposed corrective actions to be identified within 30 days of documenting the noncompliance.

This noncompliance was documented as a deficiency report and assigned to a responsible manager on September 5, 2001. A completion date of November 26, 2001, was given. Although a recommended corrective action was documented, neither the responsible manager nor the QA POC signed it. The QA organization determined the noncompliance was not an SCAQ on December 20, 2001. On December 27, 2001, the deficiency report was rewritten as a CAR. The responsible manager was changed; the response due date was changed to January 31, 2002; and the recommended corrective action was modified. As of January 9, 2001, no remedial or corrective actions were documented.

Based on this timeline, the inspectors determined the timeliness of the Contractor's corrective action did not meet the requirements of the Contractor's QA Manual or corrective action procedure. The inspectors considered this failure to meet timeliness requirements for this problem with an element of the Contractor's authorization basis to be a Finding (IR-02-001-01-FIN).

The inspectors reviewed whether requests for extensions to corrective action due dates were processed according to the Contractor's procedure. The inspectors found objective evidence of the required approvals for each CAR where an extension was requested. The inspectors observed the QA Manager had not written any escalation letters and, therefore, the inspectors did not evaluate this aspect of the Contractor's corrective action procedure.

The inspectors interviewed three managers responsible for performing investigative actions to determine whether they had considered the extent of the CAQ and had completed remedial action in a timely fashion. The managers described how the CAQs assigned to their organizations for corrective action were addressed. Each manager demonstrated how other portions of their operations and related Contractor activities were examined. The managers' actions were consistent with the requirements of the QA Manual and the Contractor's procedure. The inspectors, therefore, found the Contractor's actions to consider the extent of deficiencies and to complete remedial action were sufficient.

The inspectors reviewed the Contractor's criteria for determining whether a deficiency was a SCAQ, as documented in Appendix 1, "Significance Determination," of the corrective action procedure. The inspectors examined the 10 CARs and concurred they were correctly categorized as CAQs.

The inspectors observed the Contractor had not categorized any deficiencies as SCAQs. While the inspectors agreed with the Contractor's categorization, it was not possible to evaluate the Contractor's use of root cause analysis (RCA), which was required by procedure only for SCAQs. The Contractor indicated that RCA training would be first offered the week of January 22, 2002. The inspectors confirmed with the Contractor's training organization that, as required by the corrective action procedure, the RCA training was identified with training input.

The inspectors selected three recently completed corrective actions and examined the objective evidence the actions were, in fact, completed. The inspectors found the objective evidence was adequate. The inspectors asked the QA Manager and the QA Audit Manager to describe the Contractor's process for verifying the effectiveness of corrective actions. Both said that previously identified and corrected CAQs were considered in developing audit schedules. The inspectors considered this adequate demonstration the Contractor verified the effectiveness of corrective actions.

### **1.6.3 Conclusions**

The inspectors concluded the Contractor's corrective action process was adequate and complied with the requirements of the QA Manual. CAQs were appropriately documented; and corrective actions were defined, tracked, and verified. A Finding was identified regarding discovery of an example of untimely disposition of a deficiency (IR-02-001-01-FIN). A non-cited Finding was identified, and addressed by the Contractor, regarding the requirement to review CARs for potential occurrence reportability. Improvement was needed in the two areas identified as Findings; however, the inspectors determined these problems did not indicate significant systemic failures. The overall management of the corrective action process observed during this inspection was controlled and thorough and was appropriately focused on capturing, evaluating, and trending results; assuring closure; and verifying the effectiveness of corrective actions.

## **1.7 Follow-Up and Closure Action (ITP I-103)**

Many of the sections above reference activities that verified the corrective action process was underway or completed. As noted in Section 1.6.2, the inspectors examined a number of CARS. This examination included assessing whether the corrective action was adequate. The inspectors concluded that the corrective actions, if properly implemented, were adequate. In general, however, it was too early in the life cycle of the project to evaluate the effectiveness of implemented corrective actions.

## **1.8 Quality Trending (ITP I-103)**

### **1.8.1 Inspection Scope**

The inspectors reviewed implementation of Contractor procedure 24590-WTP-GPP-QA-204\_0, "Quality Trending and Analysis," and interviewed the Contractor's staff responsible for implementing the procedure. The inspectors evaluated compliance with the Quality Trending requirements of the QA Manual, Policy Q-16.1, "Corrective Action."

### **1.8.2 Observations and Assessments**

The inspectors determined the QA organization had established criteria for determining adverse quality trends and these criteria were sufficient. The inspectors interviewed the Contractor's staff to determine if the criteria for determining adverse quality trends, which were established and described in the Quality Trending and Analysis procedure, had been used. The Contractor identified it did not yet have enough data to use the established statistical criteria; however, the Contractor had identified meaningful data to report (e.g., timeliness of corrective actions) until more data are compiled. The inspectors found this was acceptable.

The inspectors determined the reports of nonconformance and CAQs were evaluated to identify adverse quality trends and help identify root causes, and the evaluations were appropriate. The inspectors determined the trend evaluations were performed at a minimum quarterly and in a manner that provided for prompt identification of adverse quality trends. The inspectors interviewed the Contractor's staff that had performed the evaluations and developed the reports. The Contractor evaluated information and developed reports weekly, monthly, and quarterly. The inspectors reviewed the latest quarterly report, two monthly reports, and one weekly report and found they were acceptable.

The inspectors determined the distribution of the quarterly, monthly, and weekly reports was appropriate. The reports were distributed to the Project Manager and management of the impacted organizations. The Contractor had identified neither SCAQs nor adverse trends; however, the Contractor told the inspectors that several areas had been identified that were, "going in the wrong direction," (e.g., the number of late CAR responses, more CARs opened than closed). The inspectors determined the reporting of trends was adequate.

The inspectors confirmed implementation of the Quality Trending and Analysis procedure was sufficient; however, there was no evidence the Contractor's QA Manager reviewed and approved the trend reports as required by procedure. The inspectors interviewed the QA Manager and determined it was an unintentional error in the procedure. It was his intention the reports be reviewed and approved by the QA Program Manager. The inspectors confirmed that a procedure change request was developed and approved during the course of the inspection.

### **1.8.3 Conclusions**

The inspectors found that the Contractor complied with the quality trending requirements of the QA Manual, Policy Q-18.3. The Contractor had adequately implemented the procedure for quality trending.

## **1.9 Stop Work (ITP I-103)**

### **1.9.1 Inspection Scope**

The inspectors evaluated the Contractor's compliance with the requirements of the QA Manual, Policy Q-16.2, "Stop Work." The inspectors reviewed the implementation of Contractor procedure 24590-WTP-GPP-QA-206A\_0, "Stop Work," observed QA orientation training that covered this topic, and interviewed the QA manager to determine his knowledge of the Contractor's stop work policy.

### **1.9.2 Observations and Assessments**

The inspectors determined the Contractor adequately empowered employees to stop work when concerns present an imminent danger to employee safety and health, the environment, facilities, or property. The inspectors observed the QA orientation, which included training provided to new employees regarding their responsibilities in stopping work. The QA Program Manager emphasized the importance of procedure compliance in the QA orientation. The Contractor's employees were empowered to stop work activities "...when procedure adherence is not possible OR when work could result in an unsafe condition."

The Contractor had not identified any SCAQs; thus, much of the stop work procedure had not yet been utilized.

The inspectors interviewed the QA Manager regarding his responsibilities when a stop work condition is identified and reported to the QA organization. The inspectors observed the QA Manager was knowledgeable of his responsibilities associated with initiating and lifting stop work orders.

### 1.9.3 Conclusions

The inspectors determined that the Contractor met the requirements of Policy 16.2. The inspectors found that the Contractor's program and process for empowering staff to stop work was sufficient.

### 1.10 Adequacy and Closure of Previous Inspection Item (Inspection Administrative Procedure A-106)

The following inspection follow up item, identified in a previous inspection report, was reviewed to determine if it could be closed. The inspectors verified through records review that the item was appropriately addressed.

(Closed) IR-01-001-01-IFI, "Review the completion of the plan to revise the procedures program and resolve or disposition the Procedure Challenge Team recommendations and procedure owner input." This item was identified in Inspection Report IR-01-001, *Training and Qualification Inspection*, issued in May 2001. The inspectors for IR-01-001 found it was difficult to identify specifically what the Contractor planned to do in order to disposition the Procedure Challenge Team recommendations and the input from the procedure owners.

The Procedure Challenge Team made several recommendations for improving procedures. The inspectors reviewed the Contractor's responses to the Challenge Team's recommendations and found they were adequate. In addition, since these recommendations were documented, the Contractor has completely revised its procedure system. As noted in the proceeding sections, OSR inspections examine the adequacy of Contractor procedures and document any deficiencies. Based on these factors, this item is considered closed.

## 2.0 EXIT MEETING SUMMARY

The inspectors presented preliminary inspection results to members of the Contractor's management at an exit meeting held on January 11, 2002. The Contractor acknowledged the Findings, observations, and conclusions presented.

The inspectors asked the Contractor whether any materials examined during the inspection should be considered as limited rights data. No limited rights data were identified.

## 3.0 REPORT BACKGROUND INFORMATION

### 3.1 Partial List of Persons Interviewed

Wayne Akeley, Supplier Senior Quality Engineer  
 Dominic Canazaro, QA Programs Manager  
 Betty Evans, Project Administration Specialist (Assessment Team Leader)  
 Richard Garrett, Safety Analysis Manager

Gary Grant, Audit Manager  
 George Hagen, Manager, Project Administration Document Control  
 Robert Hollenbeck, Senior Engineer Lead Auditor  
 Scott Horn, Balance of Facility Civil/Structural Engineering Supervisor  
 Howard Kaczmarek, Senior Quality Engineer Surveillance  
 Bill Klinger, Supplier QA Manager  
 Gary Kloster, Technical Baseline Manager (Assessment Team Leader)  
 Steve Lynch, Manager of Engineering Technology  
 Daniel MacKenzie, Operations Support & Integration  
 Fred Marsh, Engineering Functional Manager  
 Rob Maxwell, Quality Evaluator (MAD and CAMS database)  
 Dennis Murphy, PAAA Coordinator  
 Marshall Perks, Radiological & Fire Safety Manager (Assessment Team Leader)  
 Bill Poulson, Operations Functional Manager  
 Merl Rosenthal, Senior Safety and Health Specialist (Occurrence Reporting Lead)  
 George Shell, QA Manager  
 Dave Shugars, Special Projects  
 Bill Wagner, Business Services Functional Manager  
 Cindy White, Administrative Specialist.

### **3.2 Inspection Procedures Used**

Inspection Technical Procedure 1-103, Rev. 2, "Assessment and Corrective Action Assessment"

Inspection Administrative Procedure A-106, Rev. 1, "Verification of Corrective Actions."

### **3.3 List of Items Opened, Closed, and Discussed**

#### Opened

IR-02-001-01-FIN	Finding	Failure to take timely corrective action. (Section 1.6)
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#### Closed

IR-01-001-01-IFI	Follow-up	Review the completion of the plan to revise the procedures program and resolve or disposition the Procedure Challenge Team recommendations and procedure owner input.
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#### Discussed

None

### 3.4 List of Acronyms

ATL	Audit Team Leader
BNI	Bechtel National, Inc.
CAMS	Corrective Action Management System
CAQ	condition adverse to quality
CAR	corrective action report (reporting)
COTS	corrected on the spot
DOE	U.S. Department of Energy
ES&H	environment, safety, and health
IR	inspection report
ISMP	Integrated Safety Management Plan
ISMS	Integrated Safety Management System
ITP	Inspection Technical Procedure
MAD	Management Assessment Database
NTS	Noncompliance Tracking System
ONC	Occurrence Notification Center
ORP	Office of River Protection
OSR	Office of Safety Regulation
PAAA	Price-Anderson Amendments Act
PDC	Project Document Control
POC	point of contact
PRB	PAAA Review Board
QA	quality assurance
RCA	root cause analysis
RPP-WTP	River Protection Project Waste Treatment Plant
SCAQ	significant condition adverse to quality
SRD	Safety Requirements Document